Claims

## 1. A compound of the formula Z:

$$R_{6}$$
 $R_{7}$ 
 $R_{1}$ 
 $R_{2}$ 
 $R_{5}$ 
 $R_{4}$ 

where;

5 A is CH or N;

 $R_1$  is a substituent to a carbon atom in the ring containing A selected from  $-S(=O)_{D}Ra$ ,

where Ra is -C<sub>1</sub>-C<sub>4</sub> alkyl, -ORx, -NRxRx, -NHNRxRx, -NHNHC(=0)ORx, -NRxOH;

10 -C(=O)-Rb,

where Rb is  $-C_1-C_4$ -alkyl, ORx, -NRxRx, -NHNRxRx, -NHC<sub>1</sub>-C<sub>3</sub>-alkyl-C(=O)ORx

-NRxRc,

15

where Rc is H,  $C_1$ - $C_4$  alkyl, -NRxRx; -C(=0)Rd, -CN, S(=0) $_p$ Rx where Rd is Rd is  $C_1$ - $C_4$ -alkyl, -ORx, -NRxRx - $C_1$ - $C_3$ -alkyl-O-C1-C3alkylC(=0)ORx,

-C<sub>1</sub>-C<sub>3</sub>-alkyl-COORx;

-C<sub>1</sub>-C<sub>3</sub>alkyl-ORx

 $-(O-C_1-C_3alkyl)_q-O-Rx$ 

a 5 or 6 membered aromatic ring have 1-3 hetero atoms;

p and q are independently selected from 1 or 2;

Rx is independently selected from H, C<sub>1</sub>-C<sub>4</sub> alkyl or acetyl; or a pair of Rx can together with the adjacent N atom form a pyrrolidine, piperidine, piperazine or

25 morpholine ring;

 $R_2$  is a substituent to a carbon atom in the ring containing A and is H, halo, cyano,  $C_1$ - $C_4$ -alkyl, halo $C_1$ - $C_4$ -alkyl;

L is  $-O_{-}$ ,  $-S(=O)_{r}$  or  $-CH_{2}$ , where r is 0, 1 or 2;

 $R_3$  is H,  $C_1$ - $C_3$  alkyl;

15

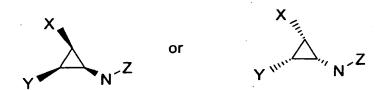
- R<sub>4</sub>-R<sub>7</sub> are independently selected from H, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>2</sub>-C<sub>6</sub> alkynyl, haloC<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>1</sub>-C<sub>6</sub> alkanoyl, haloC<sub>1</sub>-C<sub>6</sub> alkanoyl, C<sub>1</sub>-C<sub>6</sub> alkoxy, haloC<sub>1</sub>-C<sub>6</sub> alkyloxyC<sub>1</sub>-C<sub>6</sub> alkyl, haloC<sub>1</sub>-C<sub>6</sub> alkyloxyC<sub>1</sub>-C<sub>6</sub> alkyl, hydroxyC<sub>1</sub>-C<sub>6</sub> alkyl, aminoC<sub>1</sub>-C<sub>6</sub> alkyl, carboxyC<sub>1</sub>-C<sub>6</sub> alkyl, cyanoC<sub>1</sub>-C<sub>6</sub> alkyl, amino, carboxy, carbamoyl, cyano, halo, hydroxy, keto;
- X is -(CR<sub>8</sub>R<sub>8</sub>')<sub>n</sub>-D-(CR<sub>8</sub>R<sub>8</sub>')<sub>m</sub>-;
   D is a bond, -NR<sub>9</sub>-, -O-, -S-, -S(=O)- or -S(=O)<sub>2</sub>-;
   n and m are independently 0, 1 or 2, provided that they are not both 0 when D is a bond;

 $R_8$  and  $R_8$ ' are independently H,  $C_1$ - $C_3$  alkyl, halo $C_1$ - $C_3$ alkyl, hydroxy, or  $R_8$  and  $R_8$ ' together with their adjacent C atom is -C(=O)-

R<sub>9</sub> is independently H, C<sub>1</sub>-C<sub>3</sub> alkyl;

and pharmaceutically acceptable salts and prodrugs thereof; with the proviso that  $R^2$  as -C(=O)Rb is not morpholinoketo-.

- 2. A compound according to claim 1, wherein T is O.
- 20 3. A compound according to claim 1, wherein R<sub>3</sub> is H.
  - 4. A compound according to claim 1, wherein the cyclopropyl moiety has an enantiomeric excess of the conformation depicted in the partial formulae:



where X is as defined, Y is the bridge to the (substituted) phenyl ring depicted in formula I and Z is bond to the (thio)urea-pyridyl moiety depicted in formula Z.

25 5. A compound according to claim 1 wherein the compound of formula Z comprises an enantiomeric excess of the isomer showing negative optical activity.

6. A compound according to claim 1, wherein D is -O-

5

- 7. A compound according to claim 6, wherein n is 0 and m is 1.
- 8. A compound according to claim 1, wherein  $R_4$  is hydrogen, fluoro or hydroxy.
- 9. A compound according to claim 1, wherein  $R_5$  is hydrogen, fluoro,  $C_{1-3}$  alkylcarbonyl or  $C_{1-3}$ alkyloxy.
- 10. A compound according to claim 1, wherein R<sub>6</sub> is hydrogen, halo, C<sub>1</sub>10 C<sub>3</sub>alkyloxy, C<sub>1-3</sub>alkylcarbonyl, cyano or ethynyl.
  - 11. A compound according to claim 10, wherein R<sub>6</sub> is hydrogen, methoxy or fluoro.
- 12. A compound according to claim 1, wherein R<sub>7</sub> is hydrogen, cyano, halo, C<sub>1</sub>.

  3alkyloxy, or C<sub>1-3</sub>alkylcarbonyl.
  - 13. A compound according to claim 12, wherein R<sub>7</sub> is cyano, fluoro or acetyl.
- 14. A compound according to claim 1, wherein  $R_5$  and  $R_6$  are H and  $R_4$  and  $R_7$  are 20 fluoro.
  - 15. A compound according to claim 1, wherein  $R_4$  is fluoro,  $R_5$  and  $R_6$  are H, and  $R_7$  is cyano or acetyl.
- 25 16. A compound according to claim 1, wherein L is -O-.
  - 17. A compound according to claim 1, wherein  $R_1$  is  $-S(=O)_2NRxRx$ ,  $S(=O)_2C_1-C_4$  alkyl, or  $S(=O)C_1-C_4$  alkyl.
- 18. A compound according to claim 17, wherein  $R_1$  is  $-S(=O)_2NH_2$ ,  $-S(=O)_2NMe_2$  or  $-S(=O)_2NH$ -cyclopropyl.

19. A compound according to claim 17, wherein R<sub>1</sub> is -S(=O)<sub>2</sub>Me or -S(=O)Me.

- 20. A compound according to claim 1, wherein  $R_1$  is -C(=0)ORx, -C(=0)NRxRx, -C(=0)NHNRxRx or  $-C(=0)NHCH_2COORx$ .
- 21. A compound according to claim 20, wherein  $R_1$  is -C(=0)OH, -C(=0)OMe,  $C(=0)NH_2$ , -C(=0)NHMe,  $-C(=0)NHNH_2$ ,  $-C(=0)NHCH_2COOH$ .
  - 22. A compound according to claim 20, wherein  $R_1$  is -C(=O)NRx'-N-morpholine, -C(=O)NRx'-N-piperidine, -C(=O)NRx'-N-piperidine, or -C(=O)NRx'-N-piperazine, where Rx is methyl, acetyl or preferably H.
- 23. A compound according to claim 1, wherein  $R_1$  is -NRxRx,  $-N(C=0)C_1-C_4$ -alkyl or  $-NHC(=0)CH_2OC_1-C_3$ -alkyl-COORx.
  - 24. A compound according to claim 23, wherein  $R_1$  is  $-NH_2$ , -NHC(=O)Me or  $NHC(=O)CH_2OCH_2C(=O)OH$ .
- 25. A compound according to claim 1, wherein R<sub>1</sub> is -C<sub>1</sub>-C<sub>3</sub>-alkyl-COORx;

  -C<sub>1</sub>-C<sub>3</sub>alkyl-ORx, -(O-C<sub>1</sub>-C<sub>3</sub>alkyl)<sub>q</sub>-O-Rx or a 5 membered ring having 1-3 hetero atoms.
  - 26. A compound according to claim 25, wherein  $R_1$  is carboxyethyl or a methyl ester thereof, 2-methoxyethoxy or triazolyl.
- 20 27. A compound according to claim 1, wherein R<sub>1</sub> is para to the ether linkage.
  - 28. A compound according to claim 1, wherein the ring containing A is phenyl or pyrid-3-yl.
  - 29. A compound according to claim 1, wherein  $R_2$  is hydrogen or fluoro.

25

- 30. A compound according to claim 1 where R<sub>2</sub> is meta to the ether linkage.
- 31. A compound according to claim 1 denoted N-[(1S,1aR,7bR)-4,7-difluoro-1,1a,2,7b-tetrahydrocyclopropa[c]chromen-1-yl]-N'-[5-(4-(sulfonamido)phenoxy)-2-pyridinyl]urea.

32. A pharmaceutical composition comprising a compound as defined in any preceding claim and a pharmaceutically acceptable vehicle or diluent therefor.

5

15

- 33. A composition according to claim 32, further comprising 1 to 3 additional HIV antivirals.
- 10 34. A composition according to claim 32, further comprising a cytochrome P450 modulator, such as ritonavir.
  - 35. Use of a compound as defined in any of claims 1-31 in the manufacture of a medicament for the prophylaxis or treatment of HIV-1 infections.
  - 36. Use according to claim 35, wherein the HIV-1 infection is a drug escape mutant.
- 37. Use according to claim 36, wherein the drug escape mutant comprises the L100I and K103N mutations.